UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,573	07/13/2004	Hiroshi Yamamoto	EL/2-22607/CGJ 126/PCT	9324

324 7590 02/28/2007

CIBA SPECIALTY CHEMICALS CORPORATION
PATENT DEPARTMENT
540 WHITE PLAINS RD
P O BOX 2005
TARRYTOWN, NY 10591-9005

EXAMINER	
CROUSE, BRETT ALAN	
ART UNIT	**PAPER NUMBER**
1774	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/501,573	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Brett A. Crouse	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) *8,9,11 and 12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20041004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-7, and 10 drawn to a composition of chromophores in the reply filed on 29 January 2007 is acknowledged. The traversal is on the ground(s) that the overlap of the absorption spectrum of a diketopyrrolopyrrole chromophore with the fluorescent emission spectrum of a second diketopyrrolopyrrole chromophore constitutes a special technical feature under the unity of invention provision of the PCT under which this application was filed. This is not found persuasive because as shown in the art rejections below this combination of diketopyrrolopyrroles is not novel over the prior art.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by (Hendi, US 5,786,487) hereinafter known as Hendi.

Hendi teaches:

Column 2, lines 5-64, teach a diketopyrrolopyrrole (DPP) useful as a rheology improving agent for an organic pigment.

Column 4, lines 52-56, teach that the organic pigment can be a diketopyrrolopyrrole and that important pigment compositions include a (DPP) pigment and DPP derivative as a rheology improving agent.

Column 5, lines 42-58, teach that the composition can contain a plurality of rheology enhancing agents, each of which can comprise diketopyrrolopyrroles.

Column 7, lines 1-36, teach a DPP red-orange pigment and the use of a DPP containing rheology enhancing optical saturation enhancing derivative.

Column 10, line 5 through column 11, line 15, teaches orange pigment compositions having a plurality of diketopyrrolopyrroles in the composition. The red-orange color of the pigment and enhancement properties of the rheology enhancing agent are held as evidence that the diketopyrrolopyrroles of the composition inherently possess the emission and absorption peaks of between 500 and 720 nm.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by (Mizuguchi et al., US 5,808,094) hereinafter known as Mizuguchi.

Mizuguchi teaches:

Column 1, line 53 through column 3, line 40, teaches mixed crystals and solid solutions of two different diketopyrrolopyrroles.

Column 6, lines 1-65, teach a red diketopyrrolopyrrole composition comprising two diketopyrrolopyrroles. The red color of the composition is held as evidence that the diketopyrrolopyrroles of the composition inherently possess the emission and absorption peaks of between 500 and 720 nm.

Claims 1, 2, 3, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by (Eldin, US 5,919,944) hereinafter known as Eldin.

As to claims 1, 2, 3, 4, and 5:

Column 1, line 1 through column 2, line 65 teaches diketopyrrolopyrroles (DPP) of formula (I). A and B of formula (I) can be substituted or unsubstituted phenyl or naphthal groups, including substituents such as alkylamino. R_1 and R_2 can be Y-X-Z-Q of formula (II), such as $-CR_3R_4-$ (Y) wherein R_3 and R_4 are independently hydrogen or C1-C4 alkyl, substituted or unsubstituted arylene groups (X), single bond (Z), C1-C6 alkyl (Q).

Column 3, lines 15-29, teach co-polymers and monomer mixtures of diketopyrrolopyrroles and their use in coloured high molecular weight organic materials.

Column 12, lines 37-42, teach mixtures of DPP monomers.

Column 24, line 43 through column 24, line 65, table of column 24, teaches various combinations of diketopyrrolopyrroles and other high molecular weight organic materials. The mixtures are orange-red viscous solutions. The orange-red color is held as evidence that the diketopyrrolopyrroles of the composition inherently possess the emission and absorption peaks of between 500 and 720 nm.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Eldin, US 5,919,944) hereinafter known as Eldin.

The teachings of Eldin, as in the rejections above, is hereby incorporated by reference. Eldin further teaches:

Column 6, lines 41-43, teach the Q substituent of the X arylene group of formula (I) is typically includes t-butyl when Q is C1-C4 alkyl.

Column 14, line 8 through column 15, line 28 teaches as embodiments a mixture of 0.5 to 20 weight percent diketopyrrolopyrroles and 99.5 to 80 weight percent other co-polymerizable monomer.

Eldin does not teach:

Eldin does not provide examples of compounds of the host or guest diketopyrrolopyrroles of claims 6 and 7. The general formulas of Eldin do embody compounds of the instant invention as recited in claims 6 and 7.

Eldin does not explicitly teach that the monomers and other additives are colored other than with the diketopyrrolopyrroles.

As to claims 6 and 7, it would have obvious to one of ordinary skill in the art at the time of invention to produce compounds of claims 6 and 7 of the instant invention based on the teachings of Eldin as to preferred groups such as substituted or unsubstituted phenyl or naphthal for A and B of Eldin (A^1, A^2, A^3, A^4 of the instant invention) and the teachings of R_1 and R_2 of Elgin as Y-X-Z-Q of formula (II), such as $-CR_3R_4$, (R^1, R^2, R^3, R^4 of the instant invention).

As to claim 10, it would have obvious to one of ordinary skill in the art at the time of invention to produce compounds of claim 10 of the instant invention based on the teachings of Eldin. Eldin teaches customary additives and monomers associated with colored polymers, said additives and monomers inherently possess a color. Additionally, it would have obvious to modify the color of the mixture to provide enhanced aesthetic appearance to the resulting polymer.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 6,146,809, US 6,080,516, US 5,969,154, US 2001/0016269.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brett A. Crouse whose telephone number is 571-272-6494. The examiner can normally be reached on Monday - Friday 6:00AM - 2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BAC

RENA DYE
SUPERVISORY PATENT EXAMINER
AU 1774
2/20/07